NEW OR NOTEWORTHY PLANTS FROM SOUTHWESTERN CHINA¹

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This paper consists of descriptions and notes based on selected specimens of plants mainly from Yunnan, with a few from the neighboring provinces Szechuan and Kweichow. The Yunnan material was accumulated through the extensive explorations of that province made in recent years under the auspices of the Fan Memorial Institute of Biology, with the financial co-operation of the Arnold Arboretum. Vast collections of plant specimens were assembled from practically all parts of the province. Some specimens from older collections made by A. Henry and J. F. Rock that have remained unnamed have also been considered. The Kweichow collections were made for the Botanical Institute of Sun Yatsen University.

A total of twenty-six presumably new species and a few new varieties and forms are described. Notes concerning previously described species new to these provinces are given, as well as a number of new synonyms. All types of the new forms herein described are deposited in the herbarium of the Arnold Arboretum.

ANNONACEAE

Mitrephora Hooker f. & Thomson

Mitrephora Maingayi Hook. f. & Thomson in Hook. f. Fl. Brit. Ind. 1: 77. 1872; King, Ann. Bot. Gard. Calcutta 4: 112. t. 154. 1893; Ast, Suppl. Fl. Gén. Indo-Chine 1: 100. 1938.

KWEICHOW: Chen-feng, Do-wan, S. W. Teng 90866, Sept. 13, 1936, a tree 10 ft. high, in dense woods, flowers white to yellow. Borneo, Malay Peninsula, Indo-China, Hainan; new to continental China.

HAMAMELIDACEAE

Corylopsis Siebold & Zuccarini

Corylopsis Veitchiana Bean, Bot. Mag. 136: t. 8349. 1910; Rehd. & Wils. in Sargent, Pl. Wils. 1: 425. 1913.

KWANGSI: No data, Z. S. Chung 82307; Tzu-yuen District, Z. S. Chung 83556, Aug. 5, 1937, a tree, in woods. KWEICHOW: Fan Ching Shan, Tou Shan, Steward, Chiao & Cheo 571, Sept. 5, 1931, a shrub 5 m. high, on rocky slopes in forests, alt. 1400 m.

This species was formerly known from western Hupeh; the present collection considerably extends its known range. The leaves of the Kwangsi plants are mostly larger than the others.

Corylopsis polyneura sp. nov.

Frutex 0.5 m. altus, ramis gracilibus, ramulis glabris cinereo-brunneis

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minute lenticellatis, lenticellis rotundatis albidis; foliis subchartaceis petiolatis oblongo-ovatis, 6–8.5 cm. longis, 3–5.5 cm. latis, leviter inaequilateralibus, margine uno interdum rectis, apice breviter acutis, basi subcordatis, margine sinuato-denticulatis, dentibus fere ad mucronem reductis, nervis lateralibus utrinsecus 8–14 dense compactis, inferioribus manifeste ramosis, cum costa supra distincte impressis subtus elevatis perspicuis, venulis dense reticulatis gracilibus supra subimpressis subtus elevatis; petiolis 0.5–1.5 cm. longis, glabris interdum parce stipitato-glandulosis; inflorescentiis ignotis; infructescentiis spicatis, 4.5 cm. longis, pedunculis 1.5 cm. longis, glabris; fructibus 4–6 mm. diametro, glabris atrobrunneis.

YUNNAN: Cham-pu-tong, Soo-roo-la, C. W. Wang 66738 (TYPE), Oct., 1935, a shrub 1.5 ft. high, in woods, alt. 3000 m., fruit greenish yellow.

A species apparently close to *Corylopsis platypetala* Rehd. & Wils. and *C. glaucescens* Hand.-Maz., differing in the more numerous veins, which are densely and compactly arranged, strongly impressed above, and distinctly elevated beneath, the lower one branching considerably, and also in the smaller fruits.

Mytilaria Lecomte

Mytilaria laosensis Lecomte, Bull. Mus. Hist. Nat. Paris 30: 504. 1924; Chun, Sunyatsenia 1: 244. 1934.

Yunnan: No data, J. C. Liu & C. Wang 85072, in 1939.

This Indo-Chinese species has been recorded by Chun (l. c.) from Kwangtung and Kwangsi; new to Yunnan. In addition to the plants enumerated by Chun, the following specimens are also noted from Kwangsi: W. T. Tsang 22180 and S. P. Ko 55988.

ROSACEAE

Neillia D. Don

Neillia serratisepala sp. nov.

Frutex circiter 1.3 m. altus, ramulis gracilibus teretibus glabris; foliis petiolatis subchartaceis oblongo-ovatis, 6-7.5 cm. longis, 2.5-4.5 cm. latis, caudato-acuminatis (acumine ad 1.5 cm. longo), basi truncatis vel subcordatis, margine dupliciter serratis, saepissime leviter 2-4-lobatis (lobis acutis, vix 1.2 cm. longis), in sicco olivaceis, subtus pallidioribus, supra leviter hirsutis vel glabrescentibus, subtus leviter pubescentibus, nervis lateralibus utrinsecus 5 vel 6, arcuato-adscendentibus, supra subconspicuis, subtus distinctis; petiolo circiter 5 mm. longo, pubescente; stipulis ovatis, circiter 6 mm. longis et 5 mm. latis, acutis, margine distincte serratis, glabris vel subglabris; inflorescentiis terminalibus vel axillaribus gracilibus glabris, axillaribus racemosis circiter 4 cm. longis, terminalibus paniculatis circiter 6 cm. longis; bracteis bracteolisque variis, ovatis vel ovato-lanceolatis, 4-8 mm. longis, 2-3 mm. latis, acutis vel acuminatis, serrulatis; pedicellis gracilibus, 2-3 mm. longis; calycis tubo 3 mm. longo, 2 mm. lato, pubescente, lobis 5, triangularibus, acuminatis, 1.5 mm. longis; petalis albis ovatis 1.5 mm. longis; staminibus numerosis, filamentis ad 1 mm. longis.

YUNNAN: Shang-pa, H. T. Tsai 59158 (TYPE), Oct. 31, 1934, a shrub 4 ft. high, in woods, alt. 2000 m., flowers white.

A species characterized by the pubescent leaves and calyces, the serrate sepals, and the very delicate inflorescences.

Rubus Linnaeus

Rubus pectinellus Maxim. Bull. Acad. Sci. St. Pétersb. 17: 147. 1871, Mél. Biol. 8: 374. 1871; Focke, Bibl. Bot. 17 [Heft 72]: 22. f. 6. 1910.

Kweichow: Hsu-feng, She-won-shan, S. W. Teng 90491, July 2, 1936, herb, in dense shade. Japan, Formosa, Fukien; new to western China.

Rubus aralioides Hance, Jour. Bot. 22: 41. 1884; Focke, Bibl. Bot. 17 [Heft 72]: 196. 1911.

KWEICHOW: Hsu-feng, S. W. Teng 90429, June 29, 1936, a shrub on open slopes, flowers purplish red. Kwangsi: Nam Tan-yuen, C. Wang 40855, June 22, 1937, a scandent shrub in waste places, alt. 2500 ft., fruit green. Kwangtung, Fukien; new to western China.

MELIACEAE

Dysoxylum Blume

Dysoxylum cupuliforme sp. nov. § Eudysoxylum.

Arbor circiter 8 m. alta, foliis alternis, circiter 35 cm. longis, petiolis rhachibusque glabris; foliolis circiter 11 subalternis chartaceis breviter petiolulatis utrinque glabris oblongis vel oblongo-lanceolatis, 10–15 cm. longis, 4–5 cm. latis, acutis, basi leviter inaequilateraliter rotundatis, nervis lateralibus utrinsecus 9–12, curvatis, supra inconspicuis, subtus perspicue elevatis, venis tertiariis utrinque obscuris; petiolulis 5 mm. longis, glabris; paniculis supra-axillaribus laxis paucifloris breviter ramosis, ramis inferioribus circiter 2 cm. longis; floribus paucis 4-meris, circiter 1.2 cm. longis, in ramis primariis plus minusve compacte dispositis, pedicellis dense puberulis dein glabratis, 3–5 mm. longis; calyce cupulato, crasse coriaceo dense puberulo dein glabrato, margine integro; petalis 4, liberis valde incrassatis, extus dense puberulis, oblongis, circiter 8 mm. longis et 4 mm. latis; tubo stamineo brevi, 1.5 mm. longo, 2 mm. diametro, pauce ciliato crenulato; antheris 8; disco 1 mm. longo, crenato; ovario villoso; stylo 3 mm. longo, leviter ciliato.

Yunnan: Fo-hai, C. W. Wang 74908 (TYPE), July, 1936, alt. 1340 m., in forests, river side, flowers light yellow.

This species is near Dysoxylum binectariferum Hook. f. in most of its characters, both species being characterized by their coriaceous cupulate calyces. The new species can be distinguished from D. binectariferum by its much shorter, broader, and thicker calyx, which is entire and densely puberulous at first on the outside.

Dysoxylum filicifolium sp. nov. § Eudysoxylum.

Arbor circiter 20–30 m. alta, ramulis novellis dense pubescentibus, foliis alternis, circiter 55 cm. longis, petiolis rhachibusque dense pubescentibus; foliolis 15 vel 17 oppositis vel suboppositis breviter petiolulatis, membranaceis supra subglabris costa dense pubescente excepta, subtus molliter villosis, oblongo-lanceolatis, 8–14 cm. longis, 3–4.5 cm. latis, cuspidato-acuminatis, basi inaequilateraliter subrotundatis, nervis lateralibus utrinsecus 10–15, supra subconspicuis, subtus manifestis, venis tertiariis utrinque obscuris; petiolulis 3–5 mm. longis, dense pubescentibus; paniculis supra-axillaribus anguste pyramidatis laxis paucifloris, circiter 17 cm. longis; floribus paucis 4-meris circiter 4–5 mm. longis, in ramis primariis racemose dispositis, pedicellis circiter 1.5 mm. longis, puberulis; calyce puberulo, 1 mm. longo,

4-dentato, lobis orbicularibus, rotundatis, ad ½3-½ connatis; petalis 4 glabris spathulatis obtusis, circiter 4 mm. longis et 1.5 mm. latis; tubo stamineo cylindrico, utrinque ciliato, crenulato, circiter 1.5 mm. diametro et 2.5 mm. longo; antheris 8; disco 1 mm. longo, villoso; stylo 2.5 mm. longo, leviter ciliato; stigmate capitato; fructu immaturo subpyriformi, glabro, 1.1 cm. longo.

Yunnan: Nan-chiao, C. W. Wang 75309 (TYPE), June, 1936, alt. 1760 m., mountain slopes, in forests, 90 ft. high, flowers green; Che-li District, Maan-shang, C. W. Wang 78581, Sept., 1936, alt. 1300 m., mixed forests, 80 ft. high, fruit greenish yellow.

This species resembles Dysoxylum hainanense Merr. in leaf characters, except that the leaflets of the new species are larger and fewer. The inflorescences as well as the individual flowers of D. hainanense Merr. are much the longer. Moreover, its calyx-lobes are free or almost free, while in our species they are united for $\frac{1}{3}$ to $\frac{1}{2}$ their length. Hence D. hainanense falls in § Didymocheton, while the new species is included in § Eudysoxylum.

Dysoxylum grandifolium sp. nov. § Eudysoxylum.

Arbor parva circiter 3 m. alta; foliis alternis magnis, circiter 80 cm. longis, petiolis rhachibusque glabris; foliolis circiter 11 alternis chartaceis breviter petiolulatis, utrinque glabris, elliptico-oblongis, 15–30 cm. longis, 8–14 cm. latis, acutis, basi inaequilateraliter rotundatis, nervis lateralibus utrinsecus 12–15, supra inconspicuis, subtus prominentibus, venis tertiariis utrinque obscuris; petiolulis 1 cm. longis; inflorescentiis floribusque ignotis; fructu subpyriformi elongato glabro, circiter 4.5 cm. longo et 1.8 cm. crasso, loculicide 2-valvo, pericarpio valde crasso, loculis 1-spermis.

YUNNAN: Nan-chiao, C. W. Wang 75342 (TYPE), June, 1936, alt. 1250 m., in ravine, in forests, 10 ft. high, fruit yellow.

This species is imperfectly represented by one leaf and one fruit. However, the striking characters revealed by these parts alone are sufficient to distinguish it from other known species. With flowering material available, it may possibly prove to be related to *Dysoxylum binectariferum* Hook. f. The 2-valved fruit may be due to a reduction in parts.

Dysoxylum hongkongense (Tutcher) Merr. Lingnan Sci. Jour. 13: 33. 1934; Merr. & Chun, Sunyatsenia 5: 90. 1940.

Chisocheton hongkongensis Tutcher, Jour. Linn. Soc. Bot. 37: 64. 1905.

Yunnan: Fo-hai, C. W. Wang 73908, May, 1936; Nan-chiao, C. W. Wang 76972, June, 1936; Che-li District, Meng-la, C. W. Wang 78090, Sept., 1936; Che-li District, Meng-seeng, Dah-meng-lung, C. W. Wang 78449, 78449A, Sept., 1936; Che-li District, Dah-meng-lung, Maan-hung-han, C. W. Wang 78600, Sept., 1936; Jenn-yeh District, Meng-la, C. W. Wang 80596, 80662, Nov., 1936.

Originally described from Hong Kong, known also from Hainan; a new record for Yunnan. The occurrence of this Hainan and Hong Kong species, as well as of the following, *Dysoxylum Lukii* Merr., also from Hainan, in the southern part of Yunnan is worthy of note. It is highly probable that these species may eventually be found in Tonkin.

Dysoxylum Lukii Merr. Philip. Jour. Sci. 23: 247. 1923.

Yunnan: Che-li District, C. W. Wang 78588, 78658, Sept., 1936.

Previously known only from Hainan; a new record for Yunnan. The Yunnan plants, compared with the Hainan type, are taller and with smaller

inflorescences and more numerous (about 15) leaflets; but these characters are also present in some of the Hainan specimens representing the species, such as *H. Y. Liang 62273* and *F. C. How 72718*, which the Yunnan specimens closely match.

Dysoxylum spicatum sp. nov. § Eudysoxylum.

Arbor circiter 7 m. alta, ramulis glabris; foliis alternis, 50–70 cm. longis, petiolis rhachibusque glabris, foliolis 7–9 subalternis chartaceis breviter petiolulatis, utrinque glabris, ellipticis vel oblongo-ellipticis, 10–22 cm. longis, 5–10 cm. latis, cuspidatis, basi inaequilateralibus uno latere rotundatis altero subrectis, nervis lateralibus utrinsecus circiter 15, curvatis, supra inconspicuis, subtus manifestis, venis tertiariis utrinque inconspicuis; petiolulis 5 mm. longis, glabris; paniculis supra-axillaribus spicatis breviter pedunculatis, 11–14 cm. longis, glabris, pedunculis 1 cm. longis vel brevioribus; floribus 4-meris, 6–7 mm. longis, ad 3–6-fasciculatis, pedicellis glabris, 2–3 mm. longis; calyce 2 mm. longo, glabro, profunde 4-dentato, lobis acutis; petalis 4, extus glabris, oblongis, 5–6 mm. longis, 2 mm. latis; tubo stamineo cylindrico, 3 mm. longo, denticulato, extus puberulo, intus glabro; antheris 8; disco brevi leviter crenulato glabro; ovario hirsuto; stylo puberulo, stigmate distincte capitato.

Yunnan: Szemao, south mountains, A. Henry 11748 (TYPE), in forests, alt. 5000 ft., a tree 20 ft. high, flowers white; Szemao, A. Henry 11748A, in forests, alt. 4000 ft., a tree 20 ft. high, flowers white.

This is apparently close to *Dysoxylum flavescens* Hiern, a species of the Malay Peninsula, particularly in being glabrous, and in having oblong-elliptic and cuspidate leaves and spicate inflorescences. The Chinese plant has larger leaves and glabrous petals, while the flowers are clustered on the main axis of the inflorescence, characters which may be used to differentiate it from Hiern's species.

Aglaia Loureiro

Aglaia attenuata sp. nov. § Euaglaia.

Arbor 5-13 m. alta, ramulis novellis ochraceo-lepidotis; foliis circiter 40 cm. longis, petiolis circiter 7 cm. longis rhachibusque teretibus glabris; foliolis 9 alternis breviter petiolulatis firme membranaceis, utrinque glabris, lanceolatis, 18-20 cm. longis, 3.5-5 cm. latis, inferioribus minoribus, acuminatis, basi inaequilateraliter attenuatis, nervis lateralibus utrinsecus 12-15 arcuato-adscendentibus, supra subconspicuis, subtus prominulis, nervis tertiariis obscuris; petiolulis circiter 7 mm. longis, glabris; paniculis supra-axillaribus, laxis, parce lepidotis, 11-13 cm. longis, parce ramosis, paucifloris, pedunculis ad 4 cm. longis, ramis simplicibus vel breviter ramulosis; floribus 3 mm. longis, pedicellatis, pedicellis 4 mm. longis, rectis lepidotis; calyce subcupulato, 1.5 mm. longo, extus lepidoto, obtuse 5-dentato; petalis 3, obovatis, 3 mm. longis, extus parce pubescentibus vel glabris, concavis, imbricatis, basi cum tubo plus minusve connatis; tubo stamineo urceolato, deorsum angustato, circiter 2 mm. longo, glabro, antheris 6, circiter 1 mm. longis, inclusis; ovario pubescente, stigmate ovoideo glabro; fructu globoso, glabro, 1.8 cm. crasso, 1-loculari, calyce persistente, 5-dentato.

YUNNAN: Szemao, south mountains, A. Henry 12170 (fruit), alt. 4000 ft., a tree

15 ft. high; Szemao, A. Henry 12228 (TYPE), in forests, alt. 4500 ft., a tree 30 ft. high, 12228A, in forests, alt. 5000 ft., a tree 40 ft. high.

A species characterized by its lanceolate, acuminate, and attenuate leaflets. It is apparently closely allied to *Aglaia tenuifolia* Li, described below, differing in the firmer, narrower, and more numerous leaflets, and in the shorter and more obtuse calyx-lobes.

Aglaia Wangii sp. nov. § Hearnia?

Arbor 3–13 cm. alta, ramulis lepidotis, indumento pallido; foliis circiter 50 cm. longis, modice petiolatis; petiolis 8–12 cm. longis rhachibusque teretibus, glabratis; foliolis 7 vel 8 oppositis vel suboppositis aequalibus chartaceis breviter petiolulatis, supra lepidotis vel costa tantum lepidotis, subtus dense lepidotis, oblongo-lanceolatis, 14–18 cm. longis, 5–8 cm. latis, acuminatis, basi leviter inaequilateraliter cuneatis, nervis lateralibus utrinsecus 12–15, supra subconspicuis, subtus perspicue elevatis, venis tertiariis obscuris; petiolulis 5–8 mm. longis, lepidotis; paniculis fructigeris simplicibus, circiter 6 cm. longis vel longioribus, lepidotis; fructu subgloboso, circiter 2.3 cm. longo, 1.8 cm. lato, apice acuto, rufescente, glabro, 3-loculari, pedicello 1.3 cm. longo, calyce persistente, 4- vel 5-sepalo.

Yunnan: Fo-hai, C. W. Wang 73924, May, 1936, alt. 1550 m., in thickets, 40 ft. high; Che-li District, Sheau-meng-yeang, C. W. Wang 75593 (TYPE), Aug., 1936, alt. 960 m., in forest, 15 ft. high, fruit pink; Jenn-yeh District, Meng-la, C. W. Wang 80772, Nov., 1936, alt. 900 m., in mixed woods, 35 ft. high, fruit green.

A species characterized by the dense lepidote indumentum on the adult leaflets, especially on the under surface. It is apparently very close to the Malayan and Burman Aglaia minutiflora Bedd., which Beddome originally described as stellate-pubescent (Ic. Pl. Ind. Or. 1: 44. t. 193, 1874). In C. de Candolle's monograph (Monogr. Phan. 1: 616, 1878), it is described as lepidote, which agrees with the Chinese specimens. The Chinese plants in general differ from Beddome's species in having larger leaflets with acuminate apices, inequilateral bases, and pale indumentum. The fruit is 3-celled. Flowering material is desirable for further characterization.

Aglaia Wangii var. macrophylla var. nov.

A typo speciei differt foliolis alternis, ad 30 cm. longis et 11.5 cm. latis, fructu globoso, circiter 2.2 cm. crasso, calyce persistente, 5-sepalo.

YUNNAN: Nan-chiao, C. W. Wang 75131 (TYPE), June, 1936, alt. 1400 m., in forest, 60 ft. high, fruit reddish white.

Aglaia perviridis Hiern in Hook. f. Fl. Brit. Ind. 1: 556, 1875; C. DC. Monogr. Phan. 1: 610, 1878.

Yunnan: Che-li District, Jah-kuang, C. W. Wang 79063, 79064, Sept., 1936; Jenn-yeh District, Lung-huk, C. W. Wang 80112A, Oct., 1936.

Previously known from the Khasia Mountains, India. Wang 80112A is a flowering specimen with 11-foliolate leaves. Wang 79063 and 79064 are fruiting specimens with 9-foliolate leaves. The mature fruit is inequilaterally ellipsoid, 3.5 cm. long and 2 cm. wide, brownish when dry, and exactly matches Indian material available for comparison.

Aglaia tenuifolia sp. nov. § Euaglaia.

Frutex 2-5 m. altus, indumento in ramulis novellis lepidoto pallido; foliis

ad 40 cm. longis, petiolis 7-9 cm. longis rhachibusque teretibus, parce lepidotis vel glabratis; foliolis 7 alternis tenuiter membranaceis breviter petiolulatis, utrinque glabris, in sicco utrinque virescentibus, oblongo-lanceolatis, superioribus 15-18 cm. longis, 4.5-5 cm. latis, inferioribus minoribus, 7-8 cm. longis, 3-3.5 cm. latis, acute cuspidatis, basi aequilateraliter vel leviter inaequilateraliter cuneatis, nervis lateralibus utrinsecus 10-12, supra subconspicuis, subtus perspicuis, elevatis, adscendentibus, venis tertiariis obscuris; petiolulis circiter 5 mm. longis; paniculis supra-axillaribus, laxis, parce lepidotis, 8-14 cm. longis, parce ramosis, paucifloris, pedunculis ad 3 cm. longis, ramis simplicibus; floribus 3 mm. longis, longe pedicellatis, pedicellis 0.7-1 cm. longis, gracilibus, lepidotis, plerumque recurvis; calyce subcupulato, 1 mm. longo, obscure 5-dentato, lepidoto; petalis 3 obovatis obtusis, 2.5 mm. longis, extus parce pubescentibus vel glabris, concavis, imbricatis, basi cum tubo plus minusve connatis; tubo stamineo urceolato, deorsum angustato, circiter 2 mm. longo, antheris 6, 1 mm. longis, inclusis; ovario pubescente, stigmate angulato-cylindrico, apice rotundato.

Yunnan: Che-li District, Dah-meng-lung, C. W. Wang 77803 (TYPE), Aug., 1936, alt. 1100 m., ravine, in dense forests, 4 m. high, frequent; Che-li District, Kuen-ger, C. W. Wang 79306, Oct., 1936, alt. 1100 m., in mixed forests, 2 m. high; Che-li District, C. W. Wang 78043A, Aug., 1936, alt. 800 m., in thickets, 5 m. high.

This species is characterized by the very thinly membranaceous, oblong-lanceolate, acutely cuspidate leaflets, the short lax inflorescences, and the slender, long, frequently recurved pedicels.

Aglaia yunnanensis sp. nov. § Euaglaia.

Frutex 7-10 m. altus, ramulis novellis lepidotis, indumento pallido; foliis circiter 35 cm. longis, petiolis 8-9 cm. longis rhachibusque teretibus, parce lepidotis vel glabratis; foliolis 4 vel 5, breviter petiolulatis, firme membranaceis, utrinque glabris, oblongo-ovatis vel oblongo-lanceolatis, superioribus majoribus, circiter 20 cm. longis et 7.5 cm. latis, inferioribus minoribus, circiter 12 cm. longis et 4.5 cm. latis, ceteris magnitudine intermediis, apice breviter acute cuspidatis, basi inaequilateralibus uno latere subrotundatis altero subrectis, nervis lateralibus utrinsecus 10-12, patuloadscendentibus, supra conspicuis, subtus perspicuis, elevatis, venis tertiariis subconspicuis vel obscuris; petiolulis 0.5-1 cm. longis, glabratis; paniculis supra-axillaribus laxis lepidotis, ad 14 cm. longis, parce ramosis paucifloris, pedunculis ad 5 cm. longis, ramis simplicibus vel ramulosis; floribus 4 mm. longis, pedicellis 5 mm. longis vel brevioribus, lepidotis, crassis pro more rectis; calyce cupulato, 2 mm. longo, extus lepidoto, profunde 5-dentato, lobis acutis; petalis 3 obovatis, 3 mm. longis, extus parce pubescentibus vel glabris, concavis, imbricatis, basi cum tubo plus minusve connatis; tubo stamineo urceolato, deorsum plus minusve angustato, circiter 2 mm. longo, glabro, antheris 6, circiter 1 mm. longis, inclusis; ovario plus minusve pubescente, stigmate obtuse conico, glabro.

Yunnan: Fo-hai, C. W. Wang 74823A, June, 1936, alt. 1000 m., in ravines, 20 ft. high; same locality and habitat, C. W. Wang 74830 (TYPE), June, 1936, 30 ft. high.

A species resembling Aglaia tenuifolia Li in the short, lax, few-branched inflorescences, but readily distinguished by the shorter, thick, and more or less straight pedicels and the larger, fewer, and firmer leaflets.

ANACARDIACEAE

Dracontomelon Blume

Dracontomelon macrocarpum sp. nov.

Arbor circiter 23 m. alta; foliis imparipinnatis 15-foliolatis, 50 cm. longis, rhachibus teretibus glabris; petiolis teretibus glabris, circiter 12 cm. longis; foliolis brevi-petiolulatis chartaceis utrinque glabris oblongis, 10-13 cm. longis, 3.5-4.2 cm. latis, acuminatis, basi profunde inaequilateralibus uno latere acutis altero rotundatis, margine integris, nervis lateralibus utrinsecus 8-10 utrinque elevatis, venis tertiariis reticulatis utrinque conspicuis, petiolulis 4 mm. longis; inflorescentiis infructescentiisque ignotis; fructibus globosis depressis interdum sublenticellatis, 4 cm. diametro, 5-locularibus nuciformibus; endocarpio valde lignoso crasso (3.5×2.5 cm.) extus insculpto-vermiculato; exocarpio laxo spongioso extus glabro, nigrescente, duro; seminibus ellipsoideis, oleosis.

Yunnan: Jenn-yeh District, Meng-pung, C. W. Wang 78978 (TYPE), Oct., 1936, in mixed woods, frequent, alt. 1200 m., seeds edible, oily.

This is the first species of the genus known from Yunnan. Dracontomelon Dao (Blanco) Merr. & Rolfe (D. Duperreanum Pierre, D. mangiferum sensu Forbes & Hemsl. non Blume, D. sinense Stapf), a species extending from Indo-China to the Philippines, Celebes, and Moluccas, is recorded from Kwangtung. This new species is easily distinguished from D. Dao by its larger leaflets and its much larger fruits. In this herbarium, in addition to the specimens attributed to D. Dao, there is a sterile specimen, Canton Christian College 1219, also from Kwangtung, which closely simulates D. mangiferum Blume. Dracontomelon mangiferum Blume differs from the species here described in the larger leaflets and more numerous lateral nerves and in the size of the fruits.

SAPINDACEAE

Mischocarpus Blume

Mischocarpus productus sp. nov.

Arbor parva; foliis 8-foliolatis, circiter 30 cm. longis, glabris, rhachibus teretibus; petiolis circiter 5 cm. longis, teretibus; foliolis suboppositis coriaceis breviter petiolulatis ovato-oblongis, 11–17 cm. longis, 4–5.5 cm. latis, acuminatis, basi acutis, nervis lateralibus utrinsecus 10–12 utrinque elevatis prominulis, venis tertiariis subtiliter reticulatis utrinque elevatis distinctis; petiolulis 3–5 cm. longis; floribus ignotis; infructescentiis axillaribus parce pubescentibus vel glabrescentibus, ad 35 cm. longis, graciliter et laxe ramosis, fructibus spicatim dispositis, pedicellatis, inferne stipitatis (stipite gracili, circiter 12 mm. longo et 1 mm. crasso), superne distincte triangularibus, 6 mm. crassis, apice retusis, stylo brevi ad 1 mm. longo vel nullo, stigmatibus 3 recurvis persistentibus; pedicellis gracilibus, 5–6 mm. longis, parce pubescentibus vel glabrescentibus, sepalis 5, persistentibus triangularibus, 1 mm. longis.

YUNNAN: Ping-pien District, H. T. Tsai 60868 (TYPE), July 14, 1934, a small tree on rocky slopes, alt. 1300 m.

A species strongly characterized by the long, slenderly branched infruc-

tescences bearing relatively small but elongated fruits distinctly triangular at the upper part and narrowly elongate in the lower part, manifestly retuse at the apex with 3 persistent stigmas, which are subsessile or on an exceedingly short style.

THEACEAE

Gordonia Ellis

Gordonia yunnanensis (Hu) comb. nov.

Polyspora yunnanensis Hu, Bull. Fan Mem. Inst. Biol. Bot. 8: 135. 1938.

YUNNAN: In addition to the type, H. T. Tsai 56805, the following numbers may be cited: H. T. Tsai 53540, 61773.

Anneslea Wallich

Anneslea alpina sp. nov.

Frutex 2.6–4 m. altus, omnino glaber, ramulis purpureo-brunneis, teretibus crassis, 5 mm. diametro, lenticellatis; foliis subcoriaceis, plerumque in apice ramulorum confertis, ovatis, 4–6 cm. longis, 3–4.2 cm. latis, obtusis, basi late acutis, margine subintegris, in sicco supra atro-olivaceis, subtus pallidioribus minute nigro-puncticulatis, nervis lateralibus utrinsecus circiter 6, gracilibus, utrinque subobscuris, venulis obscuris; petiolo circiter 5 mm. longo; floribus axillaribus solitariis, in apice ramulorum confertis, pedicellis 1–1.5 mm. longis; sepalis coriaceis glabris ovatis acutis, circiter 12 mm. longis et 8 mm. latis, integris; petalis membranaceis, ovato-oblongis, 16 mm. longis, 10 mm. latis; filamentis glabris 4 mm. longis, antheris oblongis, 5 mm. longis, glabris, connectivo rostrato filiformi acuminato, 3 mm. longo; ovario glabro, stylo 16 mm. longo, stigmate 3-lobato.

Yunnan: Mien-ning, Po-shang, T. T. Yü 18031 (TYPE), Oct. 11, 1938, a shrub 8-12 ft. high, common in forests, alt. 2700 m., flowers purplish red.

A species related to Anneslea fragrans Wall., but distinguished by its smaller, characteristically ovate leaves, with much shorter petioles.

GUTTIFERAE

Hypericum Linnaeus

Hypericum ellipticifolium sp. nov.

Frutex 0.3 m. altus, omnino glaber, rhizomatibus subhorizontalibus, caulibus singularibus erectis teretibus gracilibus rufo-brunneis simplicibus; foliis subchartaceis sessilibus ellipticis, 4–5 cm. longis, 2–3 cm. latis, rotundatis vel leviter emarginatis, basi rotundatis, in sicco olivaceis, subtus pallidioribus, nervis lateralibus utrinsecus 2 vel 3, gracilibus valde arcuato-adscendentibus, ad apicem incurvatis, supra subconspicuis, subtus distinctis, venulis tertiariis gracilibus numerosis plus minusve cum margine parallelis; inflorescentiis terminalibus umbellatis circiter 6-floris, pedunculis circiter 1 cm. longis, bracteolis minutis, acutis, vix 1 mm. longis, pedicellis circiter 8 mm. longis; sepalis oblongo-ovatis, acuminatis, circiter 7 mm. longis et 2 mm. latis; petalis obovatis 1–1.2 cm. longis, acutis; staminibus numerosis, filamentis ad 6 mm. longis; ovario ovoideo, stylis 3, liberis, 2 mm. longis; capsulis ovoideis circiter 1.1 cm. longis et 4 mm. latis, sepalis stylisque persistentibus.

Yunnan: Taron-Taru divide, Valley of Bucahwang, T. T. Yü 20125 (TYPE), Sept. 4, 1938, common on mountain slopes in open grassland, flowers white.

A distinct species, strongly characterized by the elliptic leaves with delicate tertiary veins more or less parallel with the margins. The flowers are white, rather small, and in a terminal umbel.

Hypericum bellum sp. nov.

Frutex 0.3–0.6 m. altus, omnino glaber, rhizomatibus horizontalibus, caulibus erectis teretibus gracilibus rufo-brunneis, simplicibus vel e basi ramosis; foliis subchartaceis sessilibus cordato-ovatis, 3–5 cm. longis, 2–4 cm. latis, rotundatis vel subemarginato-rotundatis, basi subcordatis vel cordatis, in sicco olivaceis, subtus pallidioribus, nervis lateralibus utrinsecus 2–4, adscendentibus prope marginem valde arcuato-anastomosantibus, supra subconspicuis, subtus conspicuis, venulis obscuris; inflorescentiis terminalibus umbellatis, 2- vel 3-floris, interdum unifloris, glabris, sessilibus vel pedunculatis, pedunculis ad 1.2 cm. longis, bracteis bracteolisque ovato-oblongis, ad 1.2 cm. longis et 5 mm. latis, acuminatis, pedicellis 1–2.5 cm. longis; sepalis ovatis, 5–7 mm. longis, 3–7 mm. latis, rotundatis, subrufis; petalis obovatis circiter 1.8 cm. longis et 1.3 cm. latis, rotundatis, aureis; staminibus numerosis, filamentis ad 7 mm. longis; ovario ovoideo, stylis 5 liberis 3 mm. longis; capsulis ovoideis, 1.2–1.4 cm. longis, 8–9 mm. latis, sepalis stylisque persistentibus.

Yunnan: Eastern slopes of Likiang Snow Range, Yangtze watershed, J. F. Rock 10852, a shrub 1–1.5 ft. high, alt. 11000 ft., flowers yellow; Kiukiang Valley (Taron), Mt. Chingtinglaka, T. T. Yü 19497 (Type), July 28, 1938, a shrub 1–2 ft. high, common on mountain slopes in open grassland, alt. 1800–2400 m., flowers golden yellow. Sikang: Dzer-nar, Tsa-wa-rung, C. W. Wang 66384, Sept., 1935, on mountain slopes, alt. 3000 m., fruit brown; Nar-jou, Tsa-wa-rung, C. W. Wang 66482, Sept., 1935, in pine forest, alt. 3300 m., flowers yellow.

An elegant species with large showy flowers. It is probably near *Hypericum Prattii* Hemsley, differing in the shorter, broader, and more cordate leaves, and in the fewer flowers with larger petals and shorter filaments.

Ochrocarpus Thouars

Ochrocarpus yunnanensis sp. nov.

Arbor circiter 17 m. alta, omnino glabra, ramulis teretibus luteo-brunneis subnitidis, ultimis 6 mm. diametro; foliis breviter petiolatis coriaceis oblongo-lanceolatis, 20–24 cm. longis, 6–7 cm. latis, acutis vel rotundatis, basi acutis, leviter rotundato-auriculatis, leviter revolutis, in sicco olivaceis utrinque subconcoloribus, costa crassa supra prominente, subtus valde elevata, venis primariis circiter 30–35 valde obscuris, patentibus, in trabecularum reticulo confertissimo fere occultatis; petiolis 5–8 mm. longis, crassis, supra distincte canaliculatis; floribus ignotis; fructibus magnis ovoideis, 5.5–6 cm. longis, 3–3.5 cm. diametro, acutis, basi leviter constrictis, in sicco atro-brunneis, subconspicue et graciliter striatis, pedicellis saltem 1 cm. longis, seminibus singularibus ovoideis, 3.8–4.5 cm. longis, 2.2–2.4 cm. latis, utrinque rotundatis.

Yunnan: Jenn-yeh District, Meng-pung, C. W. Wang 78973 (TYPE), Oct., 1936, a tree 50 ft. high, 2 ft. in diameter, cultivated, alt. 760 m., Tai name: "long sol-pee."

The genus *Ochrocarpus* has not previously been reported from China. This species is allied to *O. siamensis* T. Anders., differing in the much larger size and the stouter branchlets, the longer and sometimes acute leaves, which

are rounded and slightly auriculate at their bases, and the larger fruits. The lateral veins of the leaves are very numerous and are conspicuous on both surfaces; they are very slender and are united by numerous veinlets forming a delicate network, being hardly distinguishable from each other. From O. Harmandii Pierre the new species can be differentiated especially by the much shorter petioles, and by the leaf-bases being rounded and slightly auriculate instead of cordate. This tree is cultivated in temple grounds of the Tai aborigines. Only detached fruits were collected, but the field label states that the tree blooms in April and has very fragrant white flowers.

FLACOURTIACEAE

Bennettiodendron Merrill

Bennettiodendron lanceolatum sp. nov.

Frutex 2 m. altus, ramulis teretibus pubescentibus; foliis membranaceis longe petiolatis lanceolatis, 14–18 cm. longis, 2–3 cm. latis, longe acuminatis, basi anguste rotundatis, margine remote serratis (dentibus prominulis longe triangularibus plus minusve papillatis ad 2 mm. longis obtusis), supra atro-viridibus glabris, subtus viridibus parce pubescentibus, costa venisque supra conspicuis, subtus valde perspicuis, nervis lateralibus utrinsecus 8–10 valde arcuato-adscendentibus prope marginem coalitis, venulis reticulatis utrinque perspicuis; petiolis ad 4 cm. longis pubescentibus; floribus ignotis; infructescentiis axillaribus vel terminalibus paniculatis circiter 1 cm. longis, pubescentibus, pedunculis 2–3 cm. longis, pedicellis 5 mm. longis, lenticellatis, fructibus globosis 1 cm. diametro, 1-locularibus, glabris atro-brunneis.

KWEICHOW: Wong-moo, Chen-feng, S. W. Teng 90993 (TYPE), Sept. 20, 1936, a shrub 6 ft. high, in dense mixed woods.

This species is strongly characterized by its long-petiolate, narrowly lanceolate, long-acuminate leaves, which are pubescent on the petioles and the under surface, and which have very prominent, somewhat papillate, remote, obtuse serrations.

THYMELAEACEAE

Wikstroemia Endlicher

Wikstroemia Domkeana nom. nov.

Daphne gracilis E. Pritz. Bot. Jahrb. 29: 480. 1900; Nitsche, Beitr. Kenntn. Daphne 28. 1907; Rehd. in Sargent, Pl. Wils. 2: 548. 1916.

Wikstroemia gracilis Domke, Notizbl. Bot. Gart. Berlin 11: 362. 1932, non Hemsley, 1849.

SZECHUAN.

MELASTOMATACEAE

Blastus Loureiro

Blastus Tsaii nom. nov.

Blastus yunnanensis Li, Jour. Arnold Arb. 25: 15. 1944, non H. Lév. 1912.

In recently proposing a new species from Yunnan based on H. T. Tsai 60813, I overlooked the fact that H. Léveillé had previously described a Blastus yunnanensis in 1912, which is the basis of Bredia yunnanensis (H. Lév.) Diels. In the synonymy of this latter species, I erroneously cited

Léveillé's binomial as Bredia yunnanensis H. Lév. (op. cit. 24) rather than Blastus yunnanensis H. Lév.

Medinilla Gaudichaud

Medinilla yunnanensis Li, Jour. Arnold Arb. 25: 39. 1944.

Two collections cited as representing this species were erroneously listed as A. Henry 10275 and 10275A; these numbers actually are A. Henry 12075 (type) and 12075A.

CORNACEAE

Helwingia Willdenow

Helwingia himalaica Hook. f. & Thomson, var. crenata (Lingelsh.) comb. nov. Helwingia crenata Lingelsh. ex Limpricht, Repert. Sp. Nov. Beih. 12: 453. 1922; Hand.-Maz. Symb. Sin. 7: 688. 1933; Chun, Sunyatsenia 4: 246. 1940.

Yunnan: Wei-si District, Kan-pu, C. W. Wang 64128, July, 1935. Szechuan, Hunan, Kwangtung.

The type was collected by Limpricht at Kuan Hsien, Szechuan (Limpricht 1286A, April, 1904); fragments and a photograph of this are in the herbarium of the Arnold Arboretum. Among the Chinese specimens of this variety, in addition to the Yunnan specimen cited above, are F. T. Wang 20545, 22880, and T. S. Wen 534 from Szechuan, and Handel-Mazzetti 539 = 11868 from Hunan, which manifestly represent the same form, but Wang-Te-Hui 121 from Hunan and W. P. Fang 1334 and Y. Tsiang 4966 from Kweichow have the leaves not at all crenate and thus should not be included in this concept, as cited by Handel-Mazzetti.

Wangerin (Pflanzenr. 41 [IV. 229]: 37. 1910) treats the genus *Helwingia* as having three species, but I fail to notice clear-cut specific differences between them, especially between *H. chinensis* Bat. and *H. himalaica* Hook. f. & Thomson. Both are variable and widely distributed. As noted by Merrill in his statement regarding *H. himalaica* var. *stenophylla* (Brittonia 4: 137. 1941), the two varieties here described which represent the extreme forms might with equal propriety be placed under *Helwingia chinensis* Bat.

Helwingia himalaica Hook. f. & Thomson, var. stenophylla Merr. Brittonia 4: 137. 1941.

Yunnan: Suen-oui, E. E. Maire 444; Pe-yen-tsin, Siméon Ten 127, May, 1916; no data, G. Forrest 9828, H. T. Tsai 57590A; Pin-chuan District, H. T. Tsai 52908, July, 1933; Ho-kin, Luho near Sung-kwei, K. M. Feng 863, April, 1939. Upper Burma; new to Yunnan.

Helwingia himalaica Hook. f. & Thomson, var. parvifolia var. nov.

A typo speciei recedit foliis ovato-lanceolatis, longe attenuatis, basi attenuatis, 2–5 cm. longis et 0.5–1.2 cm. latis.

Yunnan: Mountains of Londjre, Mekong-Salween watershed, J. F. Rock 8871 (TYPE), in 1923; Kunming, C. W. Wang 62996, April, 1935; Sung-tsu-yuan, Chenkiang, H. Wang 41451, June, 1939.

Aucuba Thunberg

Aucuba chinensis Benth, forma subintegra f. nov.

A typo speciei recedit foliis ovatis, apice rotundatis, margine integris,

raro dentibus paucis mucronulatis apicem versus praeditis, 14–18 cm. longis et 6–8 cm. latis.

YUNNAN: Mong-ka, H. T. Tsai 56310 (TYPE), Feb., 1934.

Cornus Linnaeus

Cornus oblonga Wall. forma pilosula f. nov.

A typo speciei differt foliis maturis supra subglabratis, subtus dense pilosulis.

Yunnan: Mi-le District, A. Henry 9930; Lo-ping, Bentijian, H. Handel-Mazzetti 10163, Nov., 1917; mountains south of Likiang, near Ho-ching and Chiu-ho, J. F. Rock 4069, May, 1922; Lu-se, H. T. Tsai 56983 (TYPE), Feb., 1934; Wei-si District, H. T. Tsai 59994, Nov., 1934; no data, T. T. Yü 8162; Meng-hau, Hsia-chi-chang, T. T. Yü 15841, May, 1938; southern Chungtien, Chiao-tou on the bank of the Yangtze River, K. M. Feng 3077, Oct., 1939.

Tsai 56983 and 59994 have their leaves very densely hairy beneath, while the other specimens have leaves slightly less so. Among the Szechuan specimens of the species, T. T. Yü 757, 1613, and Y. S. Liu 2126 apparently represent the same form.

Cornus macrophylla Wall. in Roxb. Fl. Ind. 1: 433. 1820; Hemsl. Kew Bull. 1909: 330. 1909; Wang. Pflanzenr. 41 (IV. 229): 71. 1910; Rehd. in Sargent, Pl. Wils. 2: 575. 1916; Hand.-Maz. Symb. Sin. 7: 689. 1933.

Cornus alosiphila W. W. Smith, Notes Bot. Gard. Edinb. 10: 19. 1917, syn. nov.

This is a common species, ranging from the Himalayan region through western and central China to Korea and Japan. As has been noticed by Rehder (l. c.), the shape of the style in *Cornus macrophylla* Wall. and related species, upon which much stress is laid by Koehne and by Wangerin, is quite variable. *Cornus alosiphila* W. W. Smith (Yunnan: on Tong-shan in the Yangtze bend, *G. Forrest 11176* [isotype, A]) is described as having a cylindric style, but an examination of an isotype in the herbarium of the Arnold Arboretum reveals a slight enlargement of the style at its apex like that of *C. macrophylla* Wall. As it is not distinguishable from the latter by other characters, a reduction seems desirable.

Cornus kweichowensis sp. nov. Subgen. Thelycrania, § Amblycaryum.

Arbor 10 m. alta, ramulis novellis gracilibus adpresse strigosis vel glabratis; foliis oppositis petiolatis chartaceis ovatis vel oblongo-ovatis, 5–8 cm. longis, 2–4 cm. latis, longe acuminatis, basi cuneatis, supra viridibus plus minusve dense adpresseque strigosis, subtus pallide viridibus dense adpresseque strigosis, nervis lateralibus utrinsecus 2 vel 3, arcuatim adscendentibus, supra subconspicuis, subtus elevatis prominentibus, venis tertiariis utrinque conspicuis; petiolis adpresse strigosis, 0.7–1.2 cm. longis; inflorescentiis dense corymbosis terminalibus circiter 5 cm. longis, 4–7 cm. latis, omnino adpresse strigosis, pedunculis 2–2.5 cm. longis, pedicellis brevibus, 0.5–1.5 mm. longis, floribus albis, 5 mm. diametro, calyce dense strigoso, 1.5 mm. longo, margine distincte 4-dentato, dentibus triangularibus, 0.5 mm. longis; petalis 4 lanceolatis acutis, 2.5 mm. longis, 1 mm. latis, extus puberulis, intus glabris; staminibus 4, filamentis 2 mm. longis; ovario 2-loculari, stylo sparse adpresseque puberulo toto cylindrico crasso longitudinaliter striato, 2 mm. longo; fructu ignoto.

KWEICHOW: Hsu-feng, Tsa-Swee, S. W. Teng 90577 (TYPE), July 13, 1936, a tree 30 ft. high, in dense woods, flowers white.

This species is characterized by the more or less dense appressed-strigose hairs on both surfaces of the leaves, the few (2 or 3 on each side) lateral nerves, and the rather stout, cylindric, longitudinally grooved styles. According to Wangerin's arrangement, this species falls in the subgenus *Thelycrania* Endl., Sect. *Amblycaryum* Koehne, Subsect. *Nigrae* Koehne. It is related to *Cornus poliophylla* C. K. Schneider & Wang. and C. *Monbeigii* Hemsl., but is distinguished from both by the characters indicated above.

Cornus yunnanensis sp. nov. Subgen. Thelycrania, § Amblycaryum.

Arbor circiter 5 m. alta, ramulis novellis pilosulis mox glabratis; foliis oppositis petiolatis chartaceis late ovatis vel ovato-ellipticis, 9–11 cm. longis, 4–5.5 cm. latis, longe acuminatis, basi late cuneatis vel subrotundatis, supra glabratis, subtus parce pilosulis vel subglabratis, nervis lateralibus utrinsecus circiter 4, arcuatim adscendentibus, supra paullo impressis, subtus prominentibus, venis reticulatis utrinque inconspicuis, supra leviter impressis; petiolis parce pilosulis vel glabratis, 1.5–2 cm. longis; inflorescentiis 2.5 cm. longis, 3.5 cm. latis, in ramulis axillaribus brachyblastis totis plus minusve pubescentibus, circiter 1 cm. longis, corymbosis, pedunculis brevibus, 0.5 cm. longis, pedicellis 1–1.5 cm. longis; calyce dense pilosulo, 1 mm. longo, margine leviter 4-dentato; petalis 4, lanceolatis, 3 mm. longis, 1 mm. latis, extus puberulis, intus glabris; staminibus 4, filamentis 2.5 mm. longis; ovario 2-loculari, stylo glabro, 3 mm. longo, apice clavato, stigmate depresse capitato; fructu ignoto.

YUNNAN: Southern Chungtien, between Zer-I and Kai-lou-wai on the banks of the Yangtze River, K. M. Feng 3410 (TYPE), Nov., 1930.

This species is near *Cornus macrophylla* Wall., from which it differs in the fewer lateral nerves and the small short-pedicellate flowers, which are more or less crowded in very small corymbs produced on short axillary branches.

STYRACACEAE

Styrax Linnaeus

Styrax rugosus Kurz, Jour. Asiat. Soc. Beng. 40(2): 61. 1871, Forest Fl. Brit. Burma 2: 141. 1877; C. B. Clarke in Hook. f. Fl. Brit. Ind. 3: 589. 1882; Perkins, Pflanzenr. 30 (IV, 241): 78. 1907.

Yunnan: Fo-hai, C. W. Wang 74113, May, 1936, a woody plant, 20 ft. high, in mixed forests, alt. 1540 m., flowers white, 77088, June, 1936, 3 m. high, in thickets, alt. 1400 m.; Nan-chiao, C. W. Wang 75068, June, 1936, a woody plant 10 ft. high, in forests, alt. 1350 m., 75198, June, 1936, a woody plant 5 ft. high, in forests, flowers white. India and Burma; new to Yunnan and to China.

Styrax chrysocarpus sp. nov.

Arbor 7–20 m. alta, ramulis novellis dense brunneo-tomentosis vel glabrescentibus; foliis chartaceis breviter petiolatis, supra scabride stellato-tomentosis, subtus stellato-tomentosis, plus minusve scabridis, oblongo-ovatis, 10–20 cm. longis, 5.5–11 cm. latis, acuminatis, basi rotundatis, margine integris, nervis lateralibus utrinsecus 5–10 supra subconspicuis cum costa dense tomentosis, subtus elevatis distinctis, venis tertiariis supra

inconspicuis subtus prominulis; petiolis 5–8 mm. longis, dense tomentosis; infructescentiis axillaribus brevibus oligocarpis dense tomentosis, floribus ignotis; fructibus ovoideis, circiter 1.8 cm. longis et 1.2 cm. diametro, apice leviter mucronatis, extus dense flavido-tomentosis; calyce persistente cupuliformi membranaceo brunneo, circiter 6 mm. longo, parce stellato-tomentoso, margine irregulariter lobato; pedicello brevi, circiter 4 mm. longo, dense tomentoso.

Yunnan: Ping-pien District, H. T. Tsai 62505 (TYPE), July 9, 1934, a tree 25 ft. high, in ravines, alt. 1400 m., 62522, July 11, 1934, a tree 20 ft. high, on open slopes, alt. 1400 m., 62766, July 18, 1934, a tree 60 ft. high, in ravines, alt. 1500 m.

A species characterized by its rather large, oblong-ovate leaves, more or less scabrid-hairy on both surfaces, the bright yellow tomentose fruits, and the membranaceous calyx.

Alniphyllum Matsumura

Alniphyllum Eberhardtii Guillaum. Bull. Soc. Bot. France 70: 885. 1923.

Yunnan: Ping-pien District, H. T. Tsai 60533, June 28, 1934, in woods, alt. 1400 m., 61240, June 26, 1934, a tree 30 ft. high, alt. 1000 m., in ravines, 61511, Aug. 17, 1934, a small tree, 20 ft. high, alt. 1200 m., on open slopes. Indo-China; new to Yunnan.

OLEACEAE

Linociera Swartz

Linociera longiflora sp. nov. § Ceranthus.

Arbor parva circiter 10 m. alta, glabra vel subglabra, ramis pallide brunneis glabris, consperse lenticellatis, ramulis junioribus castaneis, leviter pubescentibus; foliis chartaceis, oblongo-ovatis, ad 15 cm. longis et 6.5 cm. latis, acuminatis, basi attenuatis, margine integris, in sicco pallide olivaceis, utrinque concoloribus, glabris vel junioribus supra minutissime lepidotulis, nervis lateralibus utrinsecus circiter 8, arcuato-anastomosantibus, supra distinctis, subtus elevatis, venis tertiariis reticulatis laxis utrinque conspicuis; petiolo circiter 3.5 cm. longo, glabro; inflorescentiis axillaribus glabris, 6-9 cm. longis, distincte pedunculatis (pedunculis ad 3 cm. longis); bracteis bracteolisque lanceolatis acuminatis, 2-4 mm. longis; floribus perfectis, circiter 7 mm, longis, breviter (1 mm.) pedicellatis; sepalis ovatis obtusis, circiter 1.5 mm. longis; petalis liberis vel deorsum connatis, lanceolatis, revolutis, circiter 7.5 mm. longis et 1.5 mm. latis, sursum vix angustatis, obtusis; filamentis brevibus, 0.5 mm. longis, antheris ellipsoideis, 2 mm. longis, apice appendiculis 1 vel 2 ad 0.5 mm. longis praeditis; ovario ovoideo, glabro, circiter 1 mm. longo, stylo 1 mm. longo, stigmate capitato.

Yunnan: Field notes not available, H. T. Tsai 55863 (TYPE), 1933; Chen-kang District, C. W. Wang 72273, March, 1936, a tree 30 ft. high, on mountain slopes, alt. 1700 m., flowers yellow.

This species is characterized by its long petals and the more or less elongated appendages on the anther-tips, usually in pairs but sometimes only one developed. It probably belongs in the alliance of L. ramiflora (Roxb.) Wall., but evidently is not very closely related to that species.

Linociera Henryi sp. nov. § Ceranthus.

Arbor parva 5-7 m. alta, glabra vel subglabra, ramis glabris pallide

brunneis, distincte lenticellatis, ramulis ultimis subcastaneis, minute tomentellis; foliis amplis coriaceis obovato-lanceolatis 18-33 cm. longis, 6-10.5 cm. latis, acuminatis, basi longe attenuatis, margine integris, in sicco olivaceo-brunneis, subtus tomentellis, nervis lateralibus utrinsecus 12-15, subpatulis, distantibus, marginem versus curvatis, obscure arcuato-anastomosantibus, supra leviter impressis, subtus distinctis, reticulis laxis, utrinque obscuris; petiolo 2.5-4 cm. longo, glabro; inflorescentiis axillaribus vel subterminalibus, longe pedunculatis (pedunculis 2-3.5 cm. longis), paniculatis, cum pedunculis ad 15 cm. longis; floribus hermaphroditis, sublaxe dispositis, sessilibus vel subsessilibus, bracteis lanceolatis, minutis, 2-3 mm. longis; sepalis oblongo-ovatis, acuminatis, circiter 1.5 mm. longis, extus pubescentibus; petalis albidis subliberis vel deorsum minute connatis, oblongis, extus leviter pubescentibus vel glabris, circiter 3 mm. longis et 1.5 mm. latis, apice longe acuminatis; filamentis brevissimis, 0.5 mm. longis, crassis, antheris ellipticis vel oblongo-ellipticis, 1 mm. longis; ovario ovoideo, stylo 0.5 mm. longo, stigmate capitato; fructibus ovoideis angustis glabris, ad 5 cm. longis et 2.5 cm. latis.

Yunnan: Szemao, eastern mountains, A. Henry 12042 (TYPE), a tree 20 ft. high, alt. 4500 ft.; Szemao, eastern forests, A. Henry 12236, a tree 15 ft. high, alt. 4500 ft., flowers white; same locality, A. Henry 12236A, a tree 15 ft. high, alt. 4000 ft., in fruit; Ping-pien District, H. T. Tsai 60578, June 29, 1934, a shrub 12 ft. high, in ravines, alt. 1200 m., flowers green; Che-li District, Meng-soong, Dah-meng-lung, C. W. Wang 78387, Sept., 1936, 8 m. high, in mixed forests, alt. 1900 m., fruit green.

This species is closely allied to *Linociera Thorelii* Gagnep., particularly in the acuminate sepals and petals. However, it differs from this in the larger, more distinctly obovate leaves, with generally fewer nerves and relatively shorter petioles. It also has longer panicles, and, of more importance, capitate instead of divergent stigmas.

Olea Linnaeus

Olea laxiflora sp. nov.

Frutex glaber circiter 2.5 m. altus; foliis chartaceis petiolatis oblongoovatis, 9–13 cm. longis, 2.5–4 cm. latis, longe acuminatis (acumine 2 cm.
longo), basi longe acutis, margine integris, in sicco utrinque concoloribus
olivaceis, costa supra leviter depressa, subtus valde elevata, nervis lateralibus utrinsecus 8–12, utrinque subconspicuis, venis tertiariis obscuris;
petiolis 1–1.5 cm. longis, supra valde canaliculatis; inflorescentiis paniculatis axillaribus gracilibus laxifloris, circiter 6.5 cm. longis, pedunculis 2 cm.
longis, pedicellis 6–10 mm. longis, gracilibus, floribus & solis visis: calycibus 1–1.5 mm. longis, profunde 4-lobatis, lobis ovato-acuminatis, margine
leviter ciliatis; corollae tubo 2 mm. longo, 4-lobato, lobis triangularibus,
rotundatis, 1 mm. longis; staminibus 2, subhypogyneis, filamentis 0.5 mm.
longis, antheris oblongis, 0.75 mm. longis; floribus perfectis ignotis.

Yunnan: Taron-Taru Divide, Tang-teh-wang, T. T. Yü 20988 (TYPE), Nov. 7, 1938, a shrub 8 ft. high, in mixed forests, casual, alt. 2200 m., flowers white.

This is a dioecious or polygamo-dioecious, wholly glabrous species. It is probably near *Olea yunnanensis* Hand.-Maz., but is distinguished by its long-acuminate leaves and its lax inflorescences with slender pedicels.

Olea densiflora sp. nov.

Frutex 2-7 m. altus, ramulis junioribus dense pubescentibus; foliis

chartaceis petiolatis oblongo-ovatis vel oblongo-lanceolatis, 10-14 cm. longis, 3-5 cm. latis, longe acuminatis, margine pauce denticulatis vel integris, in sicco olivaceis utrinque subconcoloribus, supra glabris, subtus dense pubescentibus, costa supra impressa, subtus valde elevata, nervis lateralibus utrinsecus 6-10, supra leviter impressis, subtus subconspicuis, venis tertiariis obscuris; petiolis 0.5-1 cm. longis, pubescentibus; inflorescentiis axillaribus vel terminalibus, pubescentibus, floribus polygamodioicis; inflorescentiis & longe paniculatis, ad 20 cm. longis, bracteis oblongis, ad 8 mm. longis, floribus plus minusve confertis minutis, pedicellis gracilibus 2 mm. longis, calycibus 4-lobatis, circiter 1 mm. longis, corolla 1.5 mm. longa, 4-lobata, lobis rotundatis, minutis, antheris 1 mm. longis; inflorescentiis & paniculatis, 2-3 raro ad 10 cm. longis, floribus plus minusve confertis, minutis, pedicellis 1 mm. longis, calycibus 4-lobatis, circiter 1 mm. longis, corolla 3 mm. longa, 4-lobata, lobis rotundatis minutis, antheris 1 mm. longis, ovario glabro, stylo brevi, stigmate leviter 2-lobato; fructibus ellipsoideis, circiter 1.2 cm. longis et 6 mm. latis.

Yunnan: Szemao, A. Henry 11661 (\$), 11661A, 11661B, 11661C, 11661E, a shrub 5-10 ft. high, alt. 4500-5000 ft., flowers white, A. Henry 12598 (fruit), a shrub 10 ft. high, in forests, alt. 4000 ft.; between Keng Hung and Muang Hing, J. F. Rock 2667 (\$), 2706 (\$), Feb. 25 - March 1, 1922, a shrub or tree to 20 ft. high, on dry ridges, alt. 4000 ft.; between Muang Hing and Szemao, J. F. Rock 2749 (\$\neq\$, TYPE), 2707 (\$\frac{\nabla}{\nabla}\$), March 2-12, 1922, a shrub 8-10 ft. high, on dry hills, flowers yellow; Fo-hai, C. W. Wang 73504 (\$\nappi\$), 73602 (sterile), 73826 (\$\nappi\$), 77136 (young fruits), May, 1936, a shrub 5-16 ft. high, in mixed forests, alt. 1400-1530 m.; Nan-chiao, C. W. Wang 75151 (young fruits), 75173 (young fruits), June, 1936, a shrub 6-7 ft. high, in forests, alt. 1380 m.; Che-li District, C. W. Wang 75689 (fruits), Aug., 1936, a shrub 2-2.5 m. high, in mixed forests, alt. 1050-1400 m.; Jenn-yeh District, Meng-la, C. W. Wang 80702 (fruits), 80703 (sterile), Nov., 1936, a shrub 10-20 ft. high, alt. 850 m.

This is a polygamo-dioecious species with long staminate and short hermaphrodite panicles. From *Olea dioica* Roxb. it is readily distinguished by its pubescence and the presence of a corolla in the perfect flowers. It is apparently close to *Olea dentata* Wall., but can be distinguished by the very unequal staminate and hermaphrodite panicles, the smaller, often entire, and distinctly pubescent leaves, and the smaller flowers.

VERBENACEAE

Clerodendron Linnaeus

Clerodendron Tsaii sp. nov.

Frutex 2–7 m. altus, ramulis dense pubescentibus; foliis chartaceis petiolatis, cordato-ovatis vel ovato-oblongis, 10–19 cm. longis, 5.5–13 cm. latis, acuminatis, basi truncatis vel cordatis, margine integris, supra parce subtus dense pubescentibus, venis lateralibus utrinsecus 4–6 subconspicuis, rete venularum obscuro; petiolis cylindricis, 3–7.5 cm. longis, dense pubescentibus; inflorescentiis cymosis terminalibus ad 11 cm. longis, dense pubescentibus, pedunculis 1.5–3 cm. longis, bracteis lanceolatis acuminatis, 4–5 mm. longis, caducis, pedicellis 1 mm. longis; calycibus 3.5–4 mm. longis, dense pubescentibus, perspicue glandulosis, 5-dentatis, dentibus linearibus acuminatis, 1 mm. longis; corollae tubo 8–9 mm. longo, 0.5 mm. lato, subglabro, 5-lobato, lobis oblongo-ovatis, 3 mm. longis, 2 mm. latis, extus parce pubescentibus; staminibus 7–8 mm. exsertis; stylis 4–5 mm.

exsertis, stigmate minute 2-lobato; fructibus ovoideis, 5-8 mm. longis, 4-7 mm. latis, calycibus accrescentibus, 5-7 mm. longis.

Yunnan: Ping-pien District, H. T. Tsai 61055, July 20, 1934, 61410, Aug. 5, 1934, 61673, Aug. 25, 1934, 61748 (Type), Sept. 1, 1934, 61826, Sept. 5, 1934, 61863, Sept. 3, 1934, a shrub or small tree 6–30 ft. high, on open slopes or in ravines, alt. 1300–1400 m., flowers white.

In its pubescence, this species is probably close to *Clerodendron viscosum* Vent., but it is distinguished by the much smaller flowers with the calyces shorter than the fruits and by the very early caducous bracts and bracteoles. The flowers are not infrequently hypertrophied, apparently due to the presence of certain insects, with the corolla tubes enlarged to 2 cm. in length.

BIGNONIACEAE

Millingtonia Linnaeus f.

Millingtonia hortensis Linn. f. Suppl. 291, 1781.

Yunnan: Che-li District, Mong-hain or Gan-lan-ba, C. W. Wang 79856, Oct., 1936, 8 ft. high, in thickets, alt. 800 m., flowers light greenish yellow; Che-li District, Sheau-meng-yeang, C. W. Wang 81011, Oct., 1936, 8 m. high, alt. 900 m., flowers white; Jenn-yeh District, Lung-huk, C. W. Wang 80113, a tree 50 ft. high, in forested ravines, alt. 980 m., flowers pinkish yellow. Indo-China, Siam, India, Malaysia; new to China.

Wightia Wallich

Most authors include the genus *Wightia* in the Scrophulariaceae, but the proper position for the genus is in the Bignoniaceae. Hallier (Bull. Herb. Boiss. II. 3: 181–207. 1903) has clearly demonstrated that the genera *Wightia* and *Paulownia* should be removed from the Scrophulariaceae to the Bignoniaceae. More recently Campbell (Bull. Torrey Bot. Club 57: 47–50. 1930) reached the same conclusions for *Paulownia*, although he apparently overlooked Hallier's earlier statement.

Wightia speciosissima (D. Don) Merr. Jour. Arnold Arb. 19: 67. 1938. Gmelina speciosissima D. Don, Prodr. Nepal. 104. 1825. Wightia gigantea Wall. Pl. As. Rar. 1: 71. t. 81. 1830.

YUNNAN: No precise locality, G. Forrest 18801, 1917–19; Yun-lung District, H. T. Tsai 54557, Sept. 25, 1933, a small tree 20 ft, high, in ravines, alt. 2100 m., flowers dark pink; Mien-ning, Hopientsun, T. T. Yü 18157, Nov. 2, 1938, a tree 15–20 ft. high, common in forests, alt. 2000 m., flowers pink; Kiukiang Valley, west of Kungsian, T. T. Yü 20512, Sept. 28, 1938, a tree 20–30 ft. high, common in forests, alt. 1250 m., flowers pink. India, Burma, Indo-China. The genus and species are new to China.

Wightia elliptica Merr. Jour. Arnold Arb. 19: 66. 1938.

Yunnan: Yung-chou, Changpoling, T. T. Yü 18222, Nov. 16, 1938, a tree 20-25 ft. high, rare along the margins of rice fields, alt. 1550 m., flowers purplish pink. Indo-China; new to China.

RUBIACEAE

Hymenopogon Wallich

Hymenopogon oligocarpus sp. nov.

Frutex circiter 2 m. altus, ramulis tortuosis cicatricosis glabris, foliis juvenilibus in apice ramulorum confertis; foliis membranaceis petiolatis elliptico-lanceolatis, 10–15 cm. longis, 3–5 cm. latis, longe acuminatis, basi

attenuatis, margine integris, supra viridibus, subtus subalbis, utrinque laxe pubescentibus pilis praesertim in costa nervisque dispositis, nervis lateralibus utrinsecus 7–9, utrinque distinctis, oblique adscendentibus prope marginem arcuatim anastomosantibus, venis tertiariis utrinque subconspicuis; petiolis 1–1.5 cm. longis, pubescentibus; floribus ignotis; infructescentiis corymbosis terminalibus, rhachibus pubescentibus, circiter 5.5 cm. longis, gracilibus trichotomis, pedunculis circiter 1 cm. longis, pubescentibus, fructus 1 vel 2 gerentibus, ad basim bracteatis, bracteis triangulari-ovatis acutis, circiter 2 mm. longis, pedicellis 0.5–1 cm. longis, bracteis inferioribus saepe accrescentibus subpetaloideis petiolatis oblongis, circiter 3.5 cm. longis et 1 cm. latis, attenuatis acutis, nervis 8-jugis, petiolis circiter 2.5 cm. longis gracilibus; fructibus capsularibus glabris turbinatis, circiter 1 cm. longis et 5 mm. crassis, membranaceis, septicide 2-valvis, calycis lobis persistentibus triangulari-ovatis, 5 mm. longis, acutis; seminibus multis linearibus utrinque acute alatis, circiter 6 mm. longis, nigris.

Yunnan: Taron-Taru Divide, Lung-nan, T. T. Yü 20026 (TYPE), Aug. 28, 1938, a shrub 6 ft. high, in forests, alt. 2400 m., rare.

A new species in this small genus, strongly characterized by its membranaceous, few-nerved leaves and the rather small, few capsules.

Adina Salisbury

Adina pilulifera (Lam.) Franch. var. tonkinense (Pitard) Merr. in herb. comb. nov. Adina globiflora Salisb. var. tonkinense Pitard in Lecomte, Fl. Gén. Indo-Chine 3: 39. 1922.

Kwangsi: Chuen Yuen, Z. S. Chung 81999, June 18, 1937, a small tree in woods, along streams, flowers yellowish; Ling-wan District, S. K. Lau 28480, July 5, 1937, a shrub 4 m. high, in dense woods. Yunnan: Wen-shan District, H. T. Tsai 51606, Jan. 22, 1933, 51724, Feb. 10, 1933, a tree 25–30 ft. high, in forests, alt. 2000 m.; Pingpien District, H. T. Tsai 60253, June 17, 1934, 60482, 60486, June 29, 1934, 62129, June 2, 1934, 62246, June 4, 1934, a shrub or small tree, 10–30 ft. high, in ravines, alt. 1400 m.; Mengtze, A. Henry 13466, southeastern mountains, a tree 40 ft. high, alt. 6000 ft. Tonkin, Hainan; new to continental China.

Adina mollifolia Hutchinson in Sargent, Pl. Wils. 3: 391. 1916.

Adina asperula Hand.-Maz. Anz. Akad. Wiss. Wien 58: 232. 1921, Symb. Sin. 7: 1018. 1936, syn. nov.

Szechuan: Between Telipin and Yalung, C. Schneider 136, May 8, 1914. Yunnan: Beyendjing, Handel-Mazzetti 6301, May 13, 19, 1915; Szemao, A. Henry 11888, 12852; Talang, A. Henry 13265.

The type of A. asperula Hand.-Maz. is S. Ten 218, which I have not seen. Handel-Mazzetti 6301 is from the type locality of A. asperula and is cited (Symb. Sin. 7: 1018. 1936) by him as representing that species. The heads are slightly smaller than are those of A. mollifolia Hutchinson as represented by Henry 11888, the type, and other specimens, but they are also younger. Otherwise it cannot be distinguished from A. mollifolia, nor does Handel-Mazzetti's original description reveal any noticeable difference. A new record for Szechuan.

Anthocephalus A. Richard

Anthocephalus indicus A. Rich. Mém. Soc. Hist. Nat. Paris 1834: 237. 1834; Pitard in Lecomte, Fl. Gén. Indo-Chine 3: 32. 1922.

Yunnan: Che-li District, Sheau-meng-yeang, C. W. Wang 75585, Aug., 1936, 79612, Sept., 1936, a tree 40 ft. high, in forests, alt. 910–1000 m.; Che-li District, Dah-menglung, C. W. Wang 77417, Aug., 1936, a large tree 30 m. high, frequent in dense forests; Jenn-yeh District, Meng-hing, C. W. Wang 80024, Nov., 1936, a tree 40 ft. high, in woods, alt. 850 m.; Jenn-yeh District, Meng-la, C. W. Wang 80791, Nov., 1936, 40 ft. high, in mixed woods, alt. 900 m.; Luh-shuen District, Maan-tsang, Sheau-meng-yeang, C. W. Wang 81077, Nov., 1936, 15 m. high, in thickets, alt. 800 m. India, Ceylon, Malay Peninsula, Sumatra, Borneo, Siam, Indo-China; new to China.

Anthocephalus indicus A. Rich. var. glabrescens var. nov.

A typo speciei differt foliis subtus glabrescentibus.

YUNNAN: Che-li District, C. W. Wang 78648 (TYPE), Sept., 1936, a tree 35 ft. high, in mixed forests, alt. 1000 m.

Mussaenda Linnaeus

Mussaenda Hossei Craib, Kew Bull. 1911: 388. 1911.

Mussaenda Rehderiana Hutchinson in Sargent, Pl. Wils. 3: 397. 1916, syn. nov.

SIAM: Pass of Doi Nang Keo, J. F. Rock 1576, Dec. 31, 1921; between Meh Soi and Hue San, J. F. Rock 1839, Jan. 5, 1922; Doi Chang Mountain, near Hue San, J. F. Rock 1717, Jan. 10, 1922; in deep forest near Ba Meh Ki near Meh Cham, J. F. Rock 1896, Jan. 18, 1922. Yunnan: In forest of Pang Khun, between Keng Hung and Muang Hing, J. F. Rock 2591, Feb. 25 – March 1, 1922; Szemao, mountains to the south, A. Henry 11790 (type of M. Rehderiana Hutchinson).

Craib's type was from Chiengmai, northern Siam, whence Rock's specimens came; these closely match Craib's description. Rock's and Henry's Yunnan specimens unquestionably represent the Siamese species originally described by Craib.

Tarenna Gaertner

Tarenna depauperata Hutchinson in Sargent, Pl. Wils. 3: 411. 1916.

KWEICHOW: Cheng-feng, Gen-Kai, S. W. Teng 91044, Sept. 24, 1936, a shrub 4 ft. high, in shady places. KWANGSI: Sui-luk District, southwest of Nanning, mountains surrounding Pa Lau Village, W. T. Tsang 21901, March 1–18, 1933, 5 ft. high, in forests, fairly common on dry steep slopes, sandy soil; flowers yellow. Previously known from Yunnan only.

CAPRIFOLIACEAE

Abelia R. Brown

Abelia Graebneriana Rehd. in Sargent, Pl. Wils. 1:118. 1911.

Kweichow: Hsu-feng, She-Won-Shan, S. W. Teng 90483, July 2, 1936, a shrub 5 ft. high, in light woods, bark pale gray, branches red, flowers pink. Western Hupeh and western Szechuan; new to Kweichow.

Weigela Thunberg

Weigela japonica Thunb. var. sinica (Rehd.) Bailey, Gentes Herb. 2:49. 1929.

Diervilla japonica DC. var. sinica Rehd. Mitt. Deutsch. Dendr. Ges. 12: 264. 1913.

Kwangsi: Tzu-yuen District, Z. S. Chung 83603, Aug. 7, 1939, a shrub in woods, flowers young, pale green. Kweichow: Hsu-feng, She-Won-Shan, S. W. Teng 90477, July 1, 1936, a shrub 6 ft. high, by side of stream, fruit green. Anhwei, Chekiang, Hupeh, Szechuan.

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